Amendments to the Claims:

Claims 1-27. (Canceled)

Claim 28. (New) A composition comprising:

an orally acceptable, tooth whitening peroxyacetic acid generating mixture including a source of peroxide and an acetic acid ester of glycerin, wherein the source of peroxide and the acetic acid ester of glycerin are dispersed within an anhydrous carrier.

Claim 29. (New) The composition of claim 28 wherein the acetic acid ester of glycerin is selected from the group consisting of glyceryl triacetate, glyceryl diacetate and glyceryl acetate.

Claim 30. (New) A composition according to claim 28, wherein the source of peroxide is selected from the group consisting of carbamide peroxide, sodium percarbonate, sodium perborate, calcium peroxide, magnesium peroxide, sodium peroxide, and anhydrous poly(vinyl pyrrolidone)/hydrogen peroxide complexes.

Claim 31. (New) A composition according to claim 28 capable of providing an oral pH of more than 5.2 to generate peroxyacetic acid.

Claim 32. (New) A composition according to claim 31, wherein the oral pH is 7.8.

Claim 33. (New) The composition of claim 28 wherein the carrier is selected from the group consisting of glycerin, propylene glycol, polyethylene glycols, chewing gum and gum base products, floss carriers and floss wax products, oils, waxes and esters.

Claim 34. (New) The composition of claim 28 further comprising a thickening agent.

Claim 35. (New) The composition of claim 34 wherein the thickening agent is selected from the group consisting of neutralized carboxymethylene, polyacrylic acid polymers and copolymers, hydroxypropylcellulose and other cellulose ethers, salts of poly(methyl vinyl ether-

co-maleic anhydride), poly(vinylpyrrolidone), poly(vinylpyrrolidone-co-vinyl acetate), silicon dioxide, fumed silica, and stearic acid esters.

Claim 36. (New) The composition of claim 28 further comprising a buffer.

Claim 37. (New) The composition of claim 36 wherein the buffer is selected from the group consisting of sodium hydroxide, potassium hydroxide, ammonium hydroxide, sodium phosphate di- and tri-basic, potassium phosphate di- and tri-basic, sodium trip9lyphosphate, tris(hydroxymethyl)aminomethane, triethanolamine, polyethylenimine, polyacrylic acid, poly(methyl vinyl ether-co-maleic anhydride), citric acid, and phosphoric acid.

Claim 38. (New) The composition of claim 28 further compromising a surfactant.

Claim 39. (New) The composition of claim 38 wherein the surfactant is selected from the group consisting of zwitterionic and fluorinated surfactants.

Claim 40. (New) The composition of claim 28 further comprising a chelating agent.

Claim 41. (New) The composition of claim 40 wherein the chelating agent is selected from the group consisting of phosphonic acids, EDTA, and polyphosphates.

Claim 42. (New) The composition of claim 28 further comprising flavorants or sweeteners.

Claim 43. (New) A composition for producing peroxyacetic acid for use in whitening teeth, the composition comprising a two component system including:

a first aqueous component including hydrogen peroxide and

a second component including glyceryl triacetate.

Claim 44. (New) A method for whitening teeth comprising:

forming a composition having an oral pH in excess of about 5.2 by combining a hydrogen peroxide precursor, glyceryl triacetate, and water so as to generate peroxyacetic acid; and applying the composition to a tooth surface.

Claim 45. (New) A method for whitening teeth comprising:

applying one of either a glyceryl triacetate or a hydrogen peroxide relating compound onto a tooth surface; and

applying the other of the remaining glyceryl triacetate or hydrogen peroxide relating compound onto the same tooth surface, so as to generate peroxyacetic acid upon contact with an aqueous solution on the surface of the tooth.

Claim 46. (New) A method for whitening teeth comprising:

providing separately glyceryl triacetate and a hydrogen peroxide releasing compound, both in an orally safe and sufficient amount for whitening teeth;

forming a mixture between the glyceryl triacetate and the hydrogen peroxide releasing compound; and

applying the mixture onto a tooth surface.

Claim 47. (New) A method for cosmetically treating teeth comprising the steps of:

applying a source of labile acetyl groups onto the surface of a tooth;

allowing the source of labile acetyl groups to penetrate into the tooth;

applying a source of peroxide onto the surface of the tooth;

allowing the source of labile acetyl groups to react with the source of peroxide to generate a peroxyacid within the tooth; and

allowing the peroxyacid to effect whitening of the tooth.

Claim 48. (New) The method of claim 47 wherein the source of labile acetyl groups is a C1-C5 molecule having between 1 to 5 labile C1-C5 acyl containing groups.

Claim 49. (New) The method of claim 47 wherein the source of labile acetyl groups has a molecular weight loss less than 1000.

Claim 50. (New) The method of claim 47 wherein the source of labile acetyl groups has a molecular weight less than 500.

Claim 51. (New) The method of claim 47 wherein the source of labile acetyl groups has a molecular weight of between about 100 to about 300.

Claim 52. (New) The method of claim 47 wherein the source of labile acetyl groups has a molecular weight approximate that of glyceryl triacetate.

Claim 53. (New) An oral care composition for whitening teeth comprising:

a peroxyacetic acid-generating mixture including a source of peroxide and a source of labile acyl groups dispersed within an anhydrous carrier, wherein the carrier comprises a thickening agent consisting of polyvinylpyrrolidone.

Claim 54. (New) A composition comprising:

a tooth whitening agent, said tooth whitening agent being capable of relating an oxidizing agent, said oxidizing agent being capable of reacting with organic molecules located on a human tooth in order to remove stains from the tooth; and

a carrier comprising a liquid component and a polyvinylpyrrolidone thickener.

Claim 55. (New) The composition of claim 54, wherein the polyvinylpyrrolidone thickener is present at a concentration of from about 0.5 to 20.0% by weight of the composition.

Claim 56. (New) The composition of claim 54, further comprising a basic substance.

Claim 57. (New) The composition of claim 56, wherein the basic substance is selected from the group consisting of sodium hydroxide, potassium hydroxide, calcium hydroxide and triethanolamine.

Claim 58. (New) The composition of claim 54, wherein the tooth whitening agent is selected from the group consisting of hydrogen peroxide, carbamide peroxide, sodium perborate and sodium percarbonate.